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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,200	09/30/2003	Ming-Jiun Liaw	LIAW3003/EM	9607

23364 7590 01/04/2007  
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EXAMINER
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SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,200	<b>Applicant(s)</b> LIAW, MING-JIUN	
	<b>Examiner</b> Leonid Shapiro	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11,14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiyama et al. (US 7,084,850 B2).

As to claim 1, Hiyama et al. teaches an effective number of gray levels detection apparatus is to determine the effective number of gray levels of a display while showing motion images (col. 1, lines 6-10), which detection apparatus comprising:

an image generation means for generating a still image and its duplication but with adjustable motion vectors, and then for providing an interested display to show the above-mentioned two images at the same time (fig. 11, items 62A-62B, col. 10, lines 37-62);

wherein the still image can present the gray level capability of the display while showing still images (col. 7, lines 57-61);

an examination means for determine the effective number of gray levels of the display while showing motion images from the above-mentioned motion image (Col. 7, Lines 23-31).

As to claims 2,8 Hiyama et al. teaches gray levels of the still image are adjustable (col. 7, lines 57-61).

As to claims 3,9 Hiyama et al. teaches the motion image is the duplication of the said still image but with adjustable moving speed and direction. (fig. 8, item 522, col.9, lines 35-57).

As to claims 4,10,14-15 Hiyama et al. teaches the moving speed and direction of the moving image can be either automatically adjusted or by manually operated (in reference the image control unit) (fig. 1, items 10,60, Col. 6, lines 55-61).

As to claims 5,7 Hiyama et al. teaches the examined means are real human eyes (col. 3, lines 10-38 and col. 7, lines 31-40).

As to claim 6, Hiyama et al. teaches an effective number of gray levels detection apparatus is to determine the effective number of gray levels of a display while showing motion images (col. 1, lines 6-10), which detection apparatus comprising:

a visual simulator for simulating visual detection and recognition (fig.1, items 10-11, col. 6, lines 62-67);

an image generation means for generating a still image and its duplication but with adjustable motion vectors, and then for providing an interested display to show the above-mentioned two images at the same time (fig. 11, items 62A-62B, col. 10, lines 37-62);

wherein the still image can present the gray level capability

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of the display while showing still images (col. 7, lines 57-61);

an examination means for determine the effective number of gray levels of the display while showing motion images from the above-mentioned motion image (Col. 7, Lines 23-31).

As to claim 11, Hiyama et al. teaches an effective number of gray levels detection method is to determine the effective number of gray levels of a display while showing motion images (col. 1, lines 6-10), which detection apparatus comprising:

generating a still image and its duplication but with adjustable moving speed and direction, the duplication is referred as a motion image hereinafter, by an image generating means first and then showing images on the screen (fig. 11, items 62A-62B, col. 10, lines 37-62);

adjusting the moving speed and directions of the moving image (fig. 8, item 522, col.9, lines 35-57);

determining the discrimination of adjacent gray levels of the moving image(Col. 7, Lines 23-31).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyama et al. in view of Kawahara et al. (US 2001/0028347 A1).

Hiyama et al. does not disclose the number of gray levels of a display while showing moving images is not lost if edge of adjacent gray levels of the moving image can be discriminated.

Kawahara et al. teaches the number of gray levels of a display while showing moving images is not lost if edge of adjacent gray levels of the moving image can be discriminated (figs. 36-37, paragraphs 0009-0010).

It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate teachings of Kawahara et al. into Hiyama et al. system in order to reduce occurrences of moving image false edges (paragraph 0015 in the Kawahara et al. reference).

### ***Telephone Inquire***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS  
12.23.06



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